

IN THE CLAIMS

1. (currently amended) A method of at least partially compensating for an X-ray tube target angle heel effect, said method comprising:

positioning a filter having an anode side and a cathode side between an X-ray source and an X-ray detector, wherein the cathode side has a higher attenuation coefficient than the anode side, and wherein the attenuation coefficient is determined to at least partially compensate for the target angle heel effect.

2. (original) A method in accordance with Claim 1 wherein said positioning a filter comprises positioning a wedge shaped filter, wherein the wedge shape comprises a horizontal top, a bottom, a first vertical side and a second vertical side, wherein the horizontal top and the bottom are not parallel and wherein the first vertical side and the second vertical side are unequal in length.

3. (original) A method in accordance with Claim 2 wherein said positioning a wedge shaped filter comprises depositing a material on an X-ray tube window to form a wedge shaped filter.

4. (original) A method in accordance with Claim 3 wherein said depositing a material comprises depositing aluminum on an X-ray tube window to form a wedge shaped filter.

5. (original) A method in accordance with Claim 3 wherein said depositing a material comprises depositing copper on an X-ray tube window to form a wedge shaped filter.

6. (original) A method in accordance with Claim 2 wherein said positioning a wedge shaped filter comprises positioning the wedge shaped filter proximate an X-ray tube casing filter separated from an X-ray tube window by an oil gap.

7. (original) A method in accordance with Claim 6 wherein said positioning a wedge shaped filter further comprises positioning an aluminum wedge shaped filter.

8. (original) A method in accordance with Claim 6 wherein said positioning a

wedge shaped filter further comprises positioning a copper wedge shaped filter.

9. (original) A method in accordance with Claim 2 wherein the second vertical side comprises a length between 0.5mm and 1.5mm thicker than the first vertical side.

10. (original) A method in accordance with Claim 9 wherein the second vertical side comprises a length of 1mm greater than the first vertical side.

11. (original) A method in accordance with Claim 1 wherein said positioning a filter comprises positioning a concave-wedge shaped filter, wherein the concave-wedge shape comprises a horizontal top, a concave bottom, a first vertical side and a second vertical side, wherein the first vertical side and the second vertical side are unequal in length.

12. (original) An X-ray tube comprising:

an anode;

a cathode;

a beryllium window; and

a material deposited on said window, wherein said material is wedge shaped, wherein said wedge shape comprises a horizontal top, a bottom, a first vertical side and a second vertical side, wherein said horizontal top and said bottom are not parallel and wherein said first vertical side and said second vertical side are unequal in length.

13. (currently amended) An X-ray tube in accordance with Claim 12 wherein said material deposited on said window forms a wedge shaped filter being positioned includes depositing a material on an X-ray on said X-ray tube window to form said wedge shaped filter.

14. (original) An X-ray tube in accordance with Claim 13 wherein said material deposited on an X-ray tube window is aluminum.

15. (original) An X-ray tube in accordance with Claim 13 wherein said material deposited on an X-ray tube window is copper.

16. (currently amended) An imaging system for scanning an object comprising:

    a radiation source;

    a radiation detector positioned to receive radiation from said radiation source;

    a computer operationally coupled to said radiation source and said radiation detector; and

    a filter having an anode side and a cathode side, positioned between said source and said detector, wherein said cathode side has a higher attenuation coefficient than said anode side, and wherein the attenuation coefficient is determined to at least partially compensate for a target angle heel effect.

17. (original) A system in accordance with Claim 16 wherein said filter is wedge shaped, wherein said wedge shape comprises a horizontal top, a bottom, a first vertical side and a second vertical side, wherein said horizontal top and said bottom are not parallel and wherein said first vertical side and said second vertical side are unequal in length.

18. (original) A system in accordance with Claim 17 wherein said wedge shaped filter being positioned includes depositing a material on an X-ray tube window to form said wedge shaped filter.

19. (original) A system in accordance with Claim 18 wherein said material deposited on an X-ray tube window comprises aluminum.

20. (original) A system in accordance with Claim 18 wherein said material deposited on an X-ray tube window comprises copper.

21. (original) A system in accordance with Claim 17 wherein said wedge shaped filter being positioned includes positioning said wedge shaped filter proximate an X-ray tube casing filter separated from an X-ray tube window by an oil gap.

22. (original) A system in accordance with Claim 21 wherein said wedge shaped filter being positioned comprises aluminum.

23. (original) A system in accordance with Claim 21 wherein said wedge shaped filter being positioned comprises copper.

24. (original) A system in accordance with Claim 17 wherein said second vertical side comprises a length between 0.5mm and 1.5mm thicker than said first vertical side.

25. (original) A system in accordance with Claim 24 wherein said second vertical side comprises a length of 1mm greater than said first vertical side.

26. (original) A system in accordance with Claim 16 wherein said filter is concave-wedge shaped, wherein said concave-wedge shape comprises a horizontal top, a concave bottom, a first vertical side and a second vertical side, wherein said first vertical side and said second vertical side are unequal in length.

27. (currently amended) A Computed Tomography (CT) imaging system for scanning an object comprising:

an X-ray source;

an X-ray detector positioned to receive X-rays from said source;

a computer operationally coupled to said X-ray source and said X-ray detector; and

a filter having an anode side and a cathode side, positioned between said source and said detector, wherein said cathode side has a higher attenuation coefficient than said anode side, and wherein the attenuation coefficient is determined to at least partially compensate for a target angle heel effect.

28. (original) A system in accordance with Claim 27 wherein said filter is wedge shaped, wherein said wedge shape comprises a horizontal top, a bottom, a first vertical side and a second vertical side, wherein said horizontal top and said bottom are not parallel and wherein said first vertical side and said second vertical side are unequal in length.

29. (original) A system in accordance with Claim 28 wherein said wedge shaped filter being positioned includes depositing a material on an X-ray tube window to

form said wedge shaped filter.

30. (original) A system in accordance with Claim 29 wherein said material deposited on an X-ray tube window is aluminum.

31. (original) A system in accordance with Claim 29 wherein said material deposited on an X-ray tube window is copper.

32. (original) A system in accordance with Claim 28 wherein said wedge shaped filter being positioned includes positioning said wedge shaped filter proximate an X-ray tube casing filter separated from an X-ray tube window by an oil gap.

33. (original) A system in accordance with Claim 32 wherein said wedge shaped filter being positioned is aluminum.

34. (original) A system in accordance with Claim 32 wherein said wedge shaped filter being positioned is copper.

35. (original) A system in accordance with Claim 28 wherein said second vertical side comprises a length between 0.5mm and 1.5mm thicker than said first vertical side.

36. (original) A system in accordance with Claim 28 wherein said second vertical side comprises a length of 1mm greater than said first vertical side.

37. (original) A system in accordance with Claim 27 wherein said filter is concave-wedge shaped, wherein said concave-wedge shape comprises a horizontal top, a concave bottom, a first vertical side and a second vertical side, wherein said first vertical side and said second vertical side are unequal in length.